Before the

Federal Communications Commission

Washington, DC 20554

In the Matter of	)	
	)	
Review of Part 87 of the Commission's Rules	)	WT Docket No. 01-289
Concerning the Aviation Radio Service	)	
	)	

Reply of Aviation Spectrum Resources, Inc.

Aviation Spectrum Resources, Inc. ("ASRI"), [1] by its attorneys, hereby replies to comments filed in this proceeding in response to Second Further Notice of Proposed Rule Making ("*SFNPRM*").

On March 6, 2007, ASRI filed comments on behalf of the civil aviation community recommending that the Commission (1) adopt expanded rules for aeronautical satellite communications that would extend AMSS to the 1.6, 2, 5 GHz, and Ku-bands, license airborne earth terminals in AMSS, and require priority and real-time preemptive access for AMS(R)S communications in these expanded bands, (2) permit aviation to use 8.33 kHz channel spacing in the VHF aeronautical enroute band with the transition to the narrower bandwidth managed by ASRI on behalf the industry, and (3) make other modifications to the Rules to meet the evolving needs of aviation.

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[1] ASRI is the communications company of the air transport industry, the successor to Aeronautical Radio, Inc., as the industry licensee in the aeronautical enroute and fixed services. ASRI was spun off from ARINC to its civil aviation industry shareholders. It is advised in spectrum management matters by the Aeronautical Frequency Committee, which consists of members from the major passenger and cargo air carriers, the National Business Aircraft Association (NBAA), the Aircraft Owners and Pilots Association (AOPA), and the Helicopters Association International (HAI). In addition, non-voting representation is held by the International Air Transport Association and the Air Transport Association of America.

Comments were also filed by Inmarsat Ventures Limited ("Inmarsat"), Iridium Satellite LLC ("Iridium"), and Rockwell Collins, Inc., addressing aeronautical satellite issues, and Rockwell Collins also asks the Commission to delay further a decision on whether the 2000 air transport now flying in US airspace with 8.33 kHz capable radios will be able to use the additional capability of those radios to relieve a current shortage of frequencies in the aeronautical enroute service.[2]

I. Aeronautical Mobile Satellite Service

Inmarsat and Iridium agree with ASRI that AMS(R)S be expanded to the 1.6 GHz band and that the requirement for priority and preemption of US 308 be extended to this band.[3] Inmarsat also urges the Commission to extend AMS(R)S to the rest of the L-band MSS allocations and to apply the same priority and preemption requirements across all such MSS systems authorized to provide AMS(R)S.[4] ASRI supports these additional frequencies for AMS(R)S and the consequent extension of the requirements of US 308.[5]

The requirement for priority and preemptive access for AMS(R)S communications remains critical in systems and allocations that permit safety and non-safety services to share resources. In times of acute emergency, such as September 11, 2001, conventional communications systems can be overwhelmed, but safety

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[2] Comments were also filed by the National Oceanic and Atmospheric Administration ("NOAA"), the United States Coast Guard, and three individuals concerning the decision to phase-out 121.5 MHz ELTs in favor of 406 MHz ELTs and by one individual addressing the multicom rules. ASRI has taken no position on these issues.

[3] Inmarsat Comments at 2-5; Iridium Comments at 2-8.

[4] Inmarsat Comments at 2-3, 4-5.

[5] As noted in ASRI's Comments (at 3), Section 87.187(q) of the Rules already requires priority and real-time preemptive access capability in the 1610 – 1626.5 MHz and 5000 – 5150 MHz bands in addition to the 1545 – 1559 and 1646.5 – 1660.5 MHz bands. Part 2 of the Rules should be conformed to the service rules.

communications must get through. The United States aeronautical communications system must continue to be protected. In this regard AMS(R)S is a special subset of AMSS (which in turn is a subset of MSS).[6] AMS(R)S is a safety service under the International Telecommunication Union ("ITU") Radio Regulations,[7] and Administrations are directed to undertake "special measures to ensure their freedom from harmful interference."[8] US 308 is an example of the sort of special measures that are necessary where exclusive allocations are not employed to ensure protection of safety communications. This protection should cover all bands shared by the AMS(R)S, but need not apply to all AMSS communications, such as public correspondence.

Inmarsat and Rockwell Collins correctly point out that Part 87 does not currently accommodate all of the services being provided over the Inmarsat system in L-band and that these are currently being offered pursuant to waivers. Rockwell Collins offers specific rule changes that would accommodate these services. ASRI is concerned that these specific rules may also become outdated with the advance of technology; nonetheless, the rules proposed by Rockwell Collins should be adopted to solve the current problem.

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[6] *See* ITU Radio Regs. 1.32 (aeronautical mobile-satellite service), 1.33 (aeronautical mobile-satellite (R) service).

[7] *See* ITU Radio Regs. 5.43 (". . . the aeronautical mobile (R) service and the aeronautical mobile-satellite (R) service are reserved for communications relating to safety and regularity of flight between any aircraft and those aeronautical stations and aeronautical earth stations primarily concerned with flight along national or international civil air routes."), 1.33.

[8] ITU Radio Regs. 4.10. Inmarsat is concerned that the priority and preemption required by AMS(R)S is incompatible with a secondary allocation. This is true, but in the band 1610-1626.5 MHz AMS(R)S is a primary additional allocation, subject to agreement under ITU Radio Regs. 9.21. *See* ITU Radio Regs. 5.367.

II. Channel Spacing in the Aeronautical Enroute Service

Rockwell Collins has asked the FCC to defer a decision to permit use of 8.33 kHz channeling in the aeronautical enroute service until the Future Communications Study (FCS) group—a study group formed by the Federal Aviation Administration and EUROCONTROL to *identify* a future aeronautical communications architecture—completes its work, perhaps even later this year.[9] ASRI and the civil aviation community respectfully disagree with Rockwell Collins.

More than 2000 air transport aircraft in the United States already carry 8.33-kHz capable radios. EUROCONTROL requires these radios for any aircraft operating in the upper airspace over Europe today. Some relief to the current shortage of aeronautical enroute communications capacity can begin as soon as the FCC acts and can proceed without the need to reequip the civil aircraft. With time, re-equipage will take place, as it has with past channel splits, because the users of the spectrum will see the advantages of additional communications.

The alternative offered by Rockwell Collins will not provide any near term spectrum relief. If a new architecture for aeronautical communications is identified by the FCS group that is different from the *de facto* industry standard of VDL Mode 2 data/8.33 kHz voice, relief will be more than a decade away, perhaps much more. New standards and a broader consensus will have to be developed for the new system, a transition plan would have to be developed for air traffic control as well as aeronautical enroute service, and after that, the world's fleet of aircraft would have to be reequipped. Assuming a consensus could be achieved promptly to create a totally new system—an

[9] Rockwell Collins Comments at 8-9.

unlikely assumption—the standards and transition plan would take a minimum of 5 years to complete. (The FCS group has been working for 3 years already.) Retrofitting the United States air fleet would take a minimum of 5 years, assuming that the airlines could afford to purchase and install the new equipment in their aircraft. In addition, thousands of aeronautical stations would have to be replaced in the United States and many thousands more in the rest of the world. (ASRI has over 5,000 stations licensed to it in the United States.)

ASRI supports the efforts of the FCS to identify a common solution to the future of aviation communications, but the current solution of VDL Mode 2/8.33 kHz arose because the need for additional capacity is immediate, not in some far distant future. Acting to allow, on a permissive basis, the use of 8.33 kHz channeling in the aeronautical enroute service now will not affect the adoption of some better technology in the future. Waiting for the FCS group to "identify" a future solution at some future time will only exacerbate the current problems, and aviation will still need an interim solution to enable the future solution to be implemented.

Conclusion

The *SFNPRM* represents another milestone in the Commission's commendable effort to work for regulations that support safe and efficient flight operations. ASRI urges the Commission to move forward with the adoption of revised rules consistent with its initial comments as supplemented by the recommendation of Inmarsat that all of the

MSS L-band be available under Part 87 for AMS(R)S and the additional technical standards proposed by Rockwell Collins for L-band AMSS.

Respectfully,

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